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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,765	12/29/2000	Robert A. Wiedeman	900.0020USU	5071

7590 04/02/2004

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EXAMINER	
SMITH, SHEILA B	
ART UNIT	**PAPER NUMBER**
2681	8

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/751,765	WIEDEMAN ET AL.	
	Examiner	Art Unit	
	Sheila B. Smith	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *26* is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-12, and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al. (U.S. Patent Number 6,332,069) in view of Maeda et al. (U.S. Patent Number 6,352,222).

Regarding ***claim 1,*** Zhao et al. discloses essentially all the claimed invention as set fourth in the instant application, further Zhao et al. discloses an apparatus and method for grouping carriers to minimize the occurrence of call blocking in a satellite-based communications network. In addition Zhao et al. discloses a method for operating a mobile satellite communication system having at least one gateway (124), at least one user terminal (134), comprising steps of: for a site to be protected from UT transmissions, specifying an exclusion zone having a confidence limit (which reads on service a particular zone of coverage of the spot beam, so that signal burst can be transmitted more efficiently over the carriers between the satellite and access terminals, as disclosed in column 4 lines 40-45) associated therewith; and selectively providing service to a (134) depending on a determined location of the UT relative to the exclusion zone (which reads on this spot beam coverage area is segregated into three offset zones, as disclosed in column 15 lines 13-17) and on an estimated error (E) of the determined UT location (which reads on with 15 degree beam elevation angle, 5.3 degree

satellite inclination angle and 50% beam coverage extension (due to beam pointing error and mobile terminal beam selection error) , as disclosed in column 15 lines 9-11). However, Zhao et al. fails to specifically disclose the use of a constellation of satellites.

In the same field of endeavor, Maeda et al. discloses satellite, satellite control method and satellite communication system. In addition Maeda et al. discloses the use of a constellation of satellites as exhibited in figure 12 disclosed in column 18 lines 31-53.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Zhao et al. by modifying the a position location system with a constellation of satellites as taught by Maeda et al. for the purpose of controlling the trajectory by using the parameters.

Regarding claims 2,6,8,9, Zhao et al. discloses everything claimed as applied above (***see claim 1***) however, Zhao et al. fails to specifically discloses the use of the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface.

In the same field of endeavor, Maeda et al. discloses a satellite, satellite control method and satellite communication system. In addition Maeda et al. discloses the use of a exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface (which reads on this as to form such a polygon that includes all the service areas, as disclosed in column 10 lines 37-39).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Zhao et al. by modifying the a position location system with the exclusion zone is specified to comprise at least one of a polygon that defines an area, a

volume, or a surface as taught by Maeda et al. for the purpose of setting the initial value for the orbital inclination angle.

Regarding claims 3-5, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses a location of the UT (134) is determined by the UT (134), and transmitted to the GW (124) as disclosed in column 8 lines 55-65.

Regarding claim 7, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses the UT (134) is granted service if the value of E is less than CL as disclosed in column 1 lines 27-36.

Regarding claim 10, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses the exclusion zone is specified to comprise a surface defined by at least two connected points on the surface of the earth and at least point located above the surface of the earth as disclosed in column 1 lines 27-36.

Regarding claims 11-12, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses boundaries of the exclusion zone are static as disclosed in column 1 lines 27-36.

Regarding claims 19-25, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses wherein there are overlapping exclusion zones specified, each having a different value of CL as disclosed in column 1 lines 27-36.

2. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al. in view of Maeda et al. and further in view of Ishikawa et al. (U.S. Patent Number 6,332,069).

Regarding claims 13-18, Zhao et al. in view of Maeda et al. discloses everything claimed as applied above (***see claim 1***) however, Zhao et al. in view of Maeda et al. fails to specifically discloses the use of the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the UT.

In the same field of endeavor, Ishikawa et al. discloses a method for determining position of mobile earth station in satellite communication system. In addition Ishikawa et al. discloses the use of the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the GW (which reads on t is possible to perform high accuracy position determination by estimating and compensating for the timing error arising from instability in the accuracy of the clock of the mobile earth station and the frequency error resulting from instability of the frequency oscillator of the mobile earth station, as disclosed in column 6 lines 10-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Zhao et al. in view of Maeda et al. with the use of the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the UT as taught by Ishikawa et al. for the purpose of determine the estimated position of the mobile earth station relative to its true position.

Allowable Subject Matter

3. Claim 26 is allowed.

4. The following is an examiner's statement of reasons for allowance:

Regarding claim 26, The prior art of record considered alone or in combination neither anticipates nor renders obvious A mobile satellite communication system comprising at least one gateway, at least one user terminal, and a constellation of satellites, said GW comprising a controller for controlling operations of said UT and further comprising an interface to at least one of the Public Switched Telephone Network (PSTN) or to the Internet, said GW storing a database containing at least one of a Confidence Polygon, a Confidence Volume, or a Confidence Surface to establish a geometric shape located on the earth, above the earth or in space, or combinations thereof, said GW further storing a static or a variable Confidence value that is compared to a value of an error (E) in a position location of the UT, said controller acting upon the database and assigned or derived values of CL and E, to determine if a comparison of CL and E, combined with a current position of the UT, yields a certain result according to the operational mode of the GW controller, wherein depending on the operational mode of the GW the result of the comparison affects control of the UT or an external device attached to the UT, whereby the UT is forbidden or allowed to access the mobile satellite system or to make or receive a call, or depending on the operational mode of the GW the result of the comparison affects some operational characteristic of the UT to provide an ability to protect a site from UT emissions.

The prior art of record provided numerous teachings of methods for call blocking in a satellite-based network. However, the prior art of record failed to specifically disclose to

determine if a comparison of CL and E, combined with a current position of the UT, yields a certain result according to the operational mode of the GW controller, wherein depending on the operational mode of the GW the result of the comparison affects control of the UT or an external device attached to the UT, whereby the UT is forbidden or allowed to access the mobile satellite system or to make or receive a call, or depending on the operational mode of the GW the result of the comparison affects some operational characteristic of the UT to provide an ability to protect a site from UT emissions

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Applicant's arguments filed 12/29/03 have been fully considered but they are not persuasive.

Regarding the applicant arguments concerning the Zhao et al. reference the examiner contends that the exclusion zone for a site (which reads on the segregated area) to be protected from user terminal transmission area (which reads on the spot beam is segregated based on the maximum and minimum propagation delay experienced by access terminals) having a confidence limit associated therewith (which reads on the spot beam of Zhao et al. disclosed in column 4 lines 61-67 and column 5 lines 1-2).

The examiner further contends that the Maeda et al. reference was only used to disclose the use of a constellation of satellites. The combination of reference more than adequately meet the broadly stated claims.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Regarding the applicant arguments concerning the Zhao et al. reference failing to disclose the use of the "exclusion zone specified to comprise **at least one of** a polygon that defines an

area" the examiner has read that limitation on (defining a area) the applicant is referred back to the above rejection.

Regarding the applicant arguments concerning claim 7 the examiner contends that the blocking is minimized or the access area is less between the network and the access terminal (which reads on the UT granted service).

Regarding applicant argument concerning claims 11-12, the examiner contends that "static" as defined by Webster as "Having no motion; being at rest; quiescent" reads on the segregated area which does not move as column 1 lines 17-36.

Regarding applicant argument concerning claims 19-25, the examiner contends that overlapping exclusion zones, each having a different value of CL, this reads on (segregating the communication carriers available for the spot beam into a number of carrier groups corresponding to the number of coverage zones, and assigning to each carrier group a specific burst offset time period in accordance with which communication bursts are transmitted over carriers in the carrier group between the network and access terminals located within the coverage zone as disclosed in column 1 lines 27-36).

The examiner restates and stands by her previous reject.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila B. Smith whose telephone number is (703)305-0104. The examiner can normally be reached on Monday-Thursday 6:00 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Erika Gary can be reached on 703-308-0123. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Smith
March 15, 2004

ERIKA GARY
PATENT EXAMINER